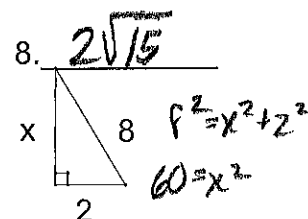
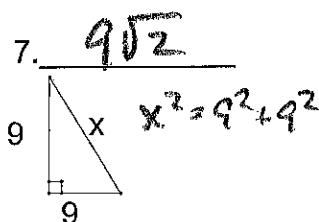
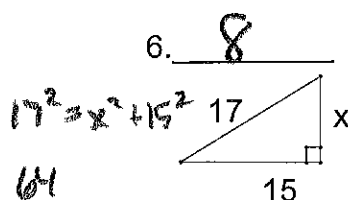
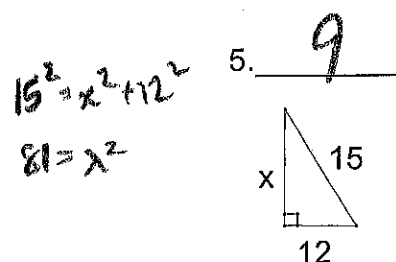
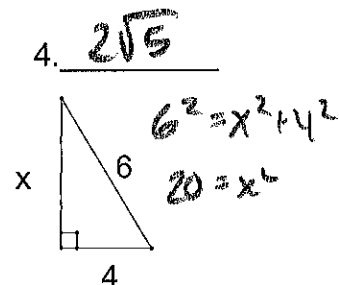
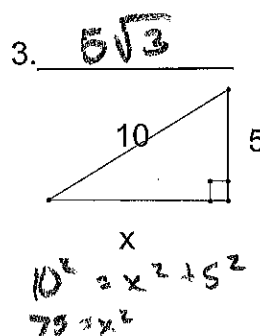
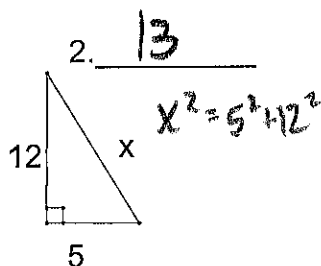
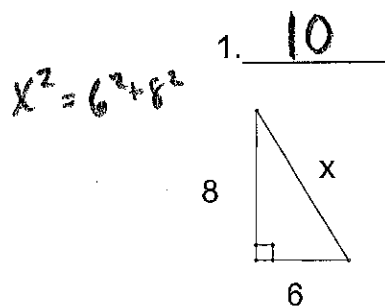


Name Key

Date \_\_\_\_\_

201 Pythagorean Theorem and the Converse (Figures are not drawn to scale.)



Determine if represent  $\Delta$  of the  $\Delta$ .

Classify the following triangles as acute, right, or obtuse.

9. Obtuse 8, 10, 11121  $\circ$  64 + 10010. Obtuse 2, 5, 636  $\circ$  2^2 + 5^211. Acute 12, 13, 1717^2  $\circ$  12^2 + 13^2  
289  $\circ$  31312. Right 8, 15, 1713. Acute 4, 4, 414. Not  $\Delta$  4, 5, 915. Obtuse A(-7, -3) B(-4, -1) C(0, -6)

$$AB = \sqrt{3^2 + 2^2} = \sqrt{13}$$

$$BC = \sqrt{4^2 + 5^2} = \sqrt{41}$$

$$AC = \sqrt{7^2 + 3^2} = \sqrt{58}$$

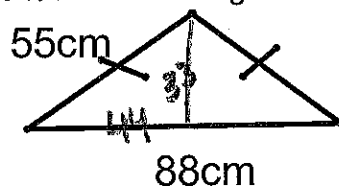
$$\sqrt{58}^2 \circ \sqrt{41}^2 + \sqrt{13}^2$$

$$58 > 54$$

Find the area of the isosceles triangles.

16.  $1452\text{cm}^2$ 

$$\frac{1}{2} \cdot 88 \cdot 33$$

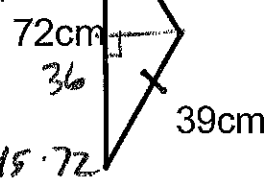
17.  $540\text{cm}^2$ 

$$39^2 = 36^2 + h^2$$

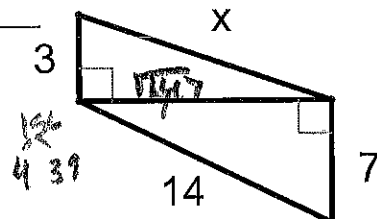
$$225$$

$$h = 15$$

$$\frac{1}{2} \cdot 15 \cdot 72$$



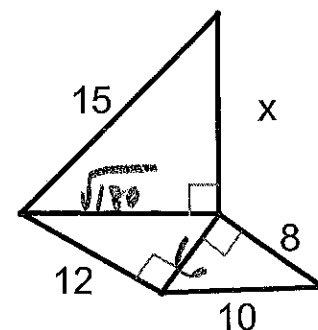
Solve for x in the given picture.

18.  $2\sqrt{39}$ 19.  $3\sqrt{5}$ 

$$6^2 + 12^2$$

$$15^2 = x^2 + \sqrt{180}^2$$

$$45 = x^2$$



$$14^2 = 7^2 + 4^2$$

$$147 = 4^2$$

$$x^2 = 3^2 + \sqrt{147}^2$$

$$x^2 = 156$$

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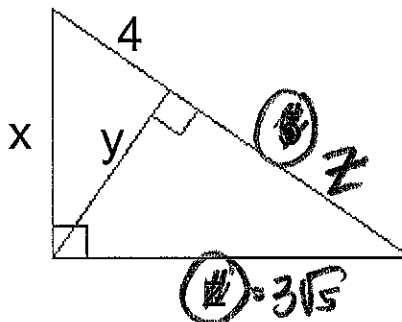
Geometric Mean—Find x, y, and z. (Figures not drawn to scale.)

1.  $x = 6$   $y = 2\sqrt{5}$   $z = 5$

$$\frac{4}{x} = \frac{x}{9}$$

$$x^2 = 36$$

Factor



$$\frac{4}{y} = \frac{y}{5}$$

$$y^2 = 20$$

$$y = 2\sqrt{5}$$

$$\frac{z}{3\sqrt{5}} = \frac{3\sqrt{5}}{z+4}$$

$$z^2 + 4z = 45$$

$$z^2 + 4z - 45 = 0$$

$$(z+9)(z-5) = 0$$

$$z = 5$$

2.  $x = 4\sqrt{5}$   $y = 8$   $z = 4$

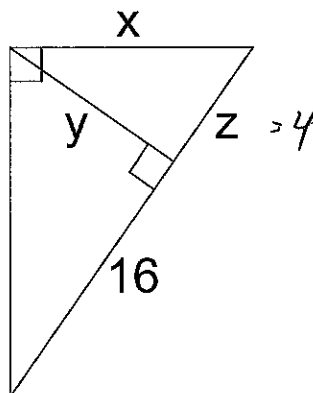
$$\frac{16}{8\sqrt{5}} = \frac{8\sqrt{5}}{z+16}$$

$$16z + 256 = 320$$

$$16z = 64$$

$$z = 4$$

$$8\sqrt{5}$$



$$\frac{4}{x} = \frac{x}{20}$$

$$\frac{4}{y} = \frac{y}{16}$$

$$x^2 = 80$$

$$4\sqrt{5}$$

$$y = 8$$

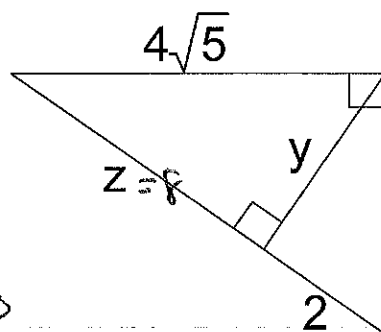
3.  $x = 2\sqrt{5}$   $y = 4$   $z = 8$

$$\frac{z}{4\sqrt{5}} = \frac{4\sqrt{5}}{z+2}$$

$$z^2 + 2z = 80$$

$$z^2 + 2z - 80 = 0$$

$$(z+10)(z-8) = 0$$



$$\frac{8}{y} = \frac{y}{2}$$

$$y = 4$$

$$\frac{z}{x} = \frac{x}{10}$$

$$x^2 = 20$$

4.  $x = 2\sqrt{5}$   $y = 3\sqrt{5}$   $z = 9$   $z = 8$

$$\frac{4}{6} = \frac{6}{z}$$

$$\frac{4}{x} = \frac{x}{5}$$

$$\frac{5}{y} = \frac{y}{9}$$

$$y^2 = 45$$

$$y = 3\sqrt{5}$$

$$4z = 36$$

$$z = 9$$

$$x^2 = 20$$

$$x = 2\sqrt{5}$$

